

STANDARD INSTRUCTIONS FOR SUBMITTING A SCIENCE TO ACHIEVE RESULTS (STAR) GRANT APPLICATION

This document contains a set of standard instructions on how applicants should apply for a STAR grant. Proposed projects must be for research designed to advance the state of knowledge in the areas described in the specific solicitation to which the application is to be submitted. Information on Eligibility to apply and technical contact personnel will be found at the end of each specific program announcement. Please see the NCERQA web site, <http://www.epa.gov/ncerqa>, for detailed information on program areas by selecting “announcements.” Information on past grants awarded may also be found on this site by selecting “grants,” then “recipients.” The required application forms are attached—they are also available on the NCERQA web site.

1. Sorting Codes

In order to facilitate proper assignment and review of applications, each topic area is assigned a sorting code.

It is the responsibility of the applicant to correctly identify the proper Sorting Code. Failure to do so could result in an inappropriate peer review assignment.

At various places within the application, applicants are asked to identify this topic area by using the Sorting Code corresponding to the topic areas within the solicitation. The Sorting Codes and application deadlines for each solicitation will be found at the end of the technical description of the specific solicitation.

The Sorting Code must be placed at the top of the abstract (as shown in the abstract format, see attached), in Box 10 of Standard Form 424 (as described below in the section on SF424), and in the address on the package that is sent to EPA (see section 3 below on **How to Apply**).

2. The Application

The initial application is made through the submission of the materials described below.

It is essential that the application contain all the information requested and be submitted in the formats described.

If an application is considered for award (i.e., after external peer review and internal review), additional forms and other information will be requested by the EPA Project Officer, whose name will also be found in the specific solicitation on the NCERQA web site.

The original, signature copy of the application should not be bound or stapled in any way.

Other copies should be stapled or bound with clips.

The Application contains the following:

- A. Standard Form 424:** The applicant must complete Standard Form 424 (see attached form and instructions). This form will act as a cover sheet for the application and **should be its first page**. Instructions for completion of the SF424 are included with the form. The form must contain the original signature of an authorized representative of the applying institution. Please note that both the Principal Investigator and an administrative contact should be identified in Section 5 of the SF424.
- B. Key Contacts:** The applicant must complete the Key Contacts Form (see attached) as the **second page** of the submitted application.
- C. Abstract: The abstract is a very important document.** Prior to attending the peer review panel meetings, some of the panelists may read only the abstract. Therefore, it is critical that the abstract accurately describe the research being proposed and convey all the essential elements of the research. Also, the abstracts of funded applications will form the basis for an Annual Report of awards made under this program and will be posted on the NCERQA web site. The abstract, **limited to one page**, should include the following information, as indicated in the example format provided. Examples of abstracts for current grants may be found on the NCERQA web site.

 - 1. Research Category and Sorting Code:** Enter the full name of the solicitation to which your application is submitted and use the correct code that corresponds to the appropriate RFA topic. (Be sure to substitute the appropriate letter and number for the "XX" in 2000-STAR-XX).
 - 2. Title:** Use the exact title as it appears in the rest of the application. The title of the application must be brief, yet represent the major thrust of the project. Because the title will be used by those not familiar with the project, avoid highly technical words or phraseology. Do not use phrases such as "research on."
 - 3. Investigators:** Start with the Principal Investigator. Also list the names and affiliations of each major co-investigator who will significantly contribute to the project.

4. **Institution:** List the name and city/state of each participating university or other applicant institution, in the same order as the list of investigators.
 5. **Project Period:** Provide the proposed project beginning and ending dates.
 6. **Project Cost:** Provide the total request to EPA for the entire project period.
 7. **Project Summary:** This should summarize: (a) the **objectives** of the study (including any hypotheses that will be tested), (b) the experimental **approach** to be used (which should give an accurate description of the project as described in the proposal), and (c) the **expected results** of the project and how it addresses the research needs identified in the solicitation, including the estimated improvement in risk assessment or risk management that will result from successful completion of the work proposed.
 8. **Supplemental Keywords:** A list of suggested keywords is provided for your use. Do not duplicate terms already used in the text of the abstract. Providing a complete set of keywords is very important.
- D. **Project Description:** This description must not exceed fifteen (15) consecutively numbered (center bottom), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins. The description must provide the following information:
1. **Objectives:** List the objectives of the proposed research and the hypotheses being tested during the project, and briefly state why the intended research is important. This section should also include any background or introductory information that would help explain the objectives of the study. If this application is for continuation of research supported by an existing or former grant awarded by the STAR program, indicate the number of the grant and provide a brief report of progress and results achieved under that grant (one to two pages recommended).
 2. **Approach:** Outline the methods, approaches, and techniques that you intend to employ in meeting the objective stated above (five to 10 pages recommended).

3. **Expected Results or Benefits:** Describe the results you expect to achieve during the project, the benefits of success as they relate to the topic under which the proposal was submitted, and the potential recipients of these benefits. This section should also discuss the utility of the research proposed for addressing the environmental problems described in the solicitation (one to two pages recommended).
4. **General Project Information:** Discuss other information relevant to the potential success of the project. This should include facilities, personnel, project schedules, proposed management, interactions with other institutions, etc. (one to two pages recommended).
5. **Important Attachments:** Appendices and/or other information may be included but must remain within the 15-page limit. References cited are in addition to the 15 pages.

The following sections are in addition to the 15-page Project Description.

- E. **Resumes:** The resumes of all principal investigators and important co-workers should be presented. Resumes must not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins for each individual.
- F. **Current and Pending Support:** The applicant **must** identify any current and pending financial resources that are intended to support research related to that included in the proposal or which would consume the time of principal investigators. This should be done by completing the appropriate form (NCERQA FORM 5, see attachment) for each investigator and other senior personnel involved in the proposal.
- G. **Budget:** The applicant must present a detailed, itemized budget for the entire project. This budget must be in the format provided in the example (see attachment) and not exceed two consecutively numbered (bottom center), 8.5x11-inch pages with 1-inch margins. Please note that institutional cost sharing is not required and, therefore, does not have to be included in the budget table. However, if you intend to cost-share, a brief statement concerning cost sharing can be added to the budget justification, which should include the estimated dollar amounts in the appropriate categories in the budget table. If a sub-contract is included in the application, provide a separate budget for the sub-contract in the same format. Include the total amount for the sub-contract under "Contracts" in the master budget.

- H. **Budget Justification:** This section should describe the basis for calculating the *personnel, fringe benefits, travel, equipment, supplies, contractual support*, and *other* costs identified in the itemized budget and explain the basis for their calculation (special attention should be given to explaining the *travel, equipment*, and *other* categories). This should also include an explanation of how the indirect costs were calculated. This justification should not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins.
- I. **Quality Assurance Statement:** For any project involving data collection or processing, conducting surveys, environmental measurements, and/or modeling, or the development of environmental technology (whether hardware-based or via new techniques) for pollution control and waste treatment, provide a statement on quality processes that will be used to assure that results of the research satisfy the intended project objectives. For awards that involve environmentally related measurements or data generation, a quality system that complies with the requirements of ANSI/ASQC E4, "*Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs*," must be in place. The Quality Assurance Statement should not exceed two consecutively numbered, 8.5x11-inch pages of single-spaced standard 12-point type with 1-inch margins. This is in addition to the 15 pages permitted for the Project Description. This Statement should, for each item listed below, present the required information, reference the relevant portion of the project description containing the information, or provide a justification as to why the item does not apply to the proposed research.
1. Discuss the activities to be performed or hypothesis to be tested and criteria for determining acceptable data quality. (Note: Such criteria may be expressed in terms of precision, accuracy, representativeness, completeness, and comparability. These criteria must also be applied to determine the acceptability of existing or secondary data to be used in the project.)
 2. Describe the study design, including sample type and location requirements, any statistical analyses that were used to estimate the types and numbers of samples required for physical samples, or equivalent information for studies using survey and interview techniques.
 3. Describe the procedures for the handling and custody of samples, including sample collection, identification, preservation, transportation,

and storage.

4. Describe the procedures that will be used in the calibration and performance evaluation of the sampling and analytical methods and equipment to be used during the project.
5. Discuss the procedures for data reduction and reporting, including a description of statistical analyses to be used and of any computer models to be designed or utilized with associated verification and validation techniques.
6. Describe the quantitative and/or qualitative procedures that will be used to evaluate the success of the project, including any plans for peer or other reviews of the study design or analytical methods prior to data collection.

ANSI/ASQC E4, "*Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs*," is available for purchase from the American Society for Quality, phone 1-800-248-1946, item T55. Only in exceptional circumstances should it be necessary to consult this document. There are EPA requirements documents (R-series) and guidance documents (G-series) available for potential applicants which address in detail how to comply with ANSI/ASQC E4. These may be found on the Internet at http://es.epa.gov/ncerqa/qa/qa_docs.html. Two EPA documents, R-5, "*EPA Requirements for Quality Assurance Project Plans*," and G-4, "*Guidance for the Data Quality Objectives Process*," are particularly pertinent to this RFA's QA requirements.

- J. **Postcard:** The Applicant must include with the application a self-addressed, stamped 3x5-inch post card. This will be used to acknowledge receipt of the application and to transmit other important information to the applicant. If the applicant does not receive an acknowledgment within 60 days of the submission deadline, contact the project official listed under "Contacts" in the specific solicitation.

3. How to Apply

The original and ten (10) copies of the fully developed application (11 in all) and one (1) additional copy of the abstract, must be received by NCERQA no later than **4:00 P.M. Eastern Time** on the closing date assigned to the topic area (see specific solicitation for date).

The application and abstract **must** be prepared in accordance with these instructions. Informal, incomplete, or unsigned proposals will not be considered. The original, signature copy of the application should not be bound or stapled in any way. The required number of copies of the application should be secured with paper or binder clips.

Completed applications should be sent via **regular mail** to:

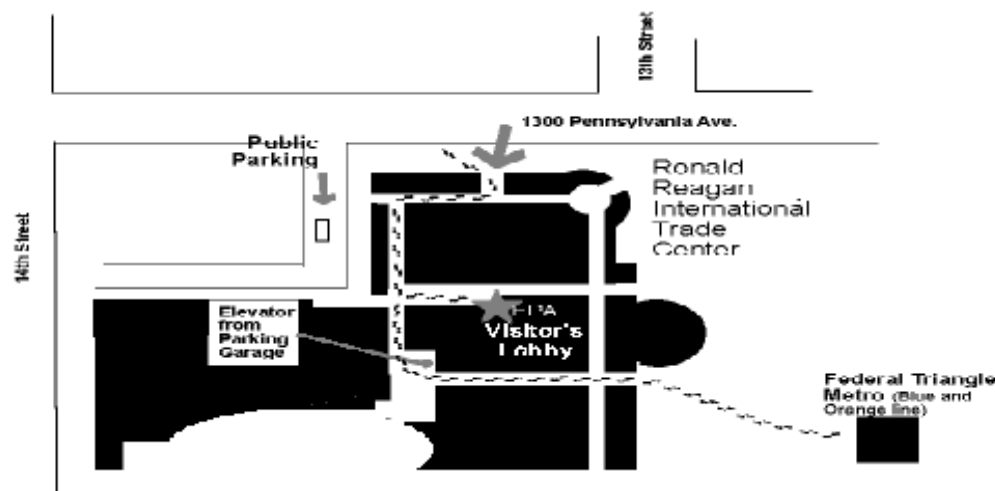
U.S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 2000-STAR-XX (replace the "XX" with the appropriate code)
401 M Street, SW
Washington DC 20460

For **express mail**-delivered applications, the following address must be used:

U. S. Environmental Protection Agency
Peer Review Division (8703R)
Sorting Code: 2000-STAR-XX (replace the "XX" with the appropriate code)
Room B-10105
1300 Pennsylvania Avenue, NW
Washington, DC 20004

Phone: (202) 564-6939 (for express mail applications)

Courier- or personally-delivered applications must be brought to the Ronald Reagan Building, 1300 Pennsylvania Avenue, NW, Washington, DC 20004. The courier must come to the EPA Visitors Lobby (see map), tell the security guard that he/she has a delivery for the EPA mail room. The courier will be required to sign a visitor's log, and will be directed to the EPA mail room. The mail room is open 8:00 a.m. until 4:00 p.m. weekdays, exclusive of Federal holidays. If the applicant requires a receipt for the delivery, you will need to provide a form which the mail room personnel will sign.



4. Guidelines, Limitations, and Additional Requirements

Applications must be submitted to only one topic area, using a single Sorting Code. Applications submitted to more than one RFA topic will be assigned to the topic designated on the first version received or to the first sorting code designated on the application. If you wish to submit more than one application to the STAR program, you must ensure that the research proposed is significantly different from any other that has been submitted to this solicitation or from any other grant you are currently receiving from EPA or any other federal government agency.

Projects which contain sub-contracts constituting more than 40% of the total direct cost of the grant for each year in which the subcontract is awarded will be subject to special review. Additional justification for extensive use of such sub-contracts must be provided in which the need is discussed in relation to the accomplishment of the specific objectives of the research project.

5. Review and Selection Criteria

All grant applications are reviewed by an appropriate technical peer review panel. This review is designed to evaluate each proposal according to its scientific merit. In general, each review group is composed of non-EPA scientists, engineers, social scientists, and/or economists who are experts in their respective disciplines and are proficient in the technical subjects they are reviewing. Reviewers use the following criteria to help them in their evaluations:

1. The originality and creativity of the proposed research, the appropriateness and adequacy of the research methods proposed, and the appropriateness and adequacy of the Quality Assurance Narrative Statement. Is the research approach practical and technically defensible, and can the project be performed within the proposed time period? Will the research contribute to scientific knowledge in the topic area of the solicitation? Is the proposal well-prepared with supportive information that is self-explanatory and understandable?
2. The qualifications of the principal investigator(s) and other key personnel, including research training, demonstrated knowledge of pertinent literature, experience, and publication records. Will all key personnel contribute a significant time commitment to the project?
3. The availability and/or adequacy of the facilities and equipment proposed for the project. Are there any deficiencies that may interfere with the successful completion of the research?

4. The responsiveness of the proposal to the research needs identified for the topic area. Does the proposal adequately address the objectives specified for this topic area?
5. Although budget information is not used by the reviewers as the basis for their evaluation of scientific merit, the reviewers are asked to provide their view on the appropriateness and/or adequacy of the proposed budget and its implications for the potential success of the proposed research. Input on requested equipment is of particular interest.

Applications that receive scores of excellent and very good from the peer reviewers are subjected to a programmatic review within EPA to assure a balanced research portfolio for the Agency. Scientists from ORD Laboratories and EPA Program and Regional Offices review these applications in relation to program priorities and the ORD intramural research program. Recommendations are then made to the NCERQA Director who makes funding decisions. Grants are selected on the basis of technical merit, relevancy to the research priorities outlined, program balance, and budget.

Customarily, applicants are notified about award decisions within 6 months of the application deadline. A summary statement of the scientific review by the peer panel will be provided to each applicant with the award or declination letter.

Applications selected for funding will require additional certifications, possibly a revised budget, responses to any comments or suggestions offered by the peer reviewers, and an electronic version of the revised project abstract. EPA Project Officers will contact Principal Investigators to obtain these materials.

6. Proprietary Information

By submitting an application in response to this solicitation, the applicant grants EPA permission to share the application with technical reviewers both within and outside the Agency. Applications containing proprietary or other types of confidential information will be returned to the applicant without review.

7. Funding Mechanism

The funding mechanism for all awards issued under this solicitation will consist of grants from EPA. All award decisions are subject to the availability of funds. In accordance with Public Law 95-224, the primary purpose of a grant is to accomplish a public purpose of support or stimulation authorized by Federal statute rather than acquisition for the direct benefit of the Agency. In issuing a grant agreement, EPA

anticipates that there will be no substantial EPA involvement in the design, implementation, or conduct of the research. However, EPA will monitor research progress through annual reports provided by grantees and contacts with the Principal Investigator.

8. Expectations and Responsibilities of STAR Grantees

Meetings. Researchers will be expected to budget for and participate in periodic All-Investigators Meetings (otherwise known as program reviews) approximately once per year with EPA scientists and other grantees to report on research activities and to discuss issues of mutual interest.

Approval of Changes. Prior written approval is required from EPA if there is to be a significant change in the research that deviates markedly from the application. Examples of these changes are contained in 40 C.F.R. 30.25.

Human Subjects. The recipient must agree to meet all EPA requirements for studies relating to the testing of human beings prior to implementing any work with humans under the grant. EPA must approve the recipient's compliance with these requirements before work begins. If human subjects are involved in this project, the recipient must provide, as part of annual reports, evidence of the subsequent reviews by the Institutional Review Board.

Reports. As a result of the grant, the recipient will agree to provide to NCERQA annual progress reports with associated summaries for posting on NCERQA's web site, and a final report with an executive summary for web posting. The recipient will be required to provide copies of any peer reviewed journal article(s) resulting from the research during the project period and should continue to notify the EPA Project Officer of any papers that are published after termination of the grant which were based on research supported by the grant. NCERQA intends to post references to all publications resulting from the grant on its Home Page.

9. Contacts

Additional general information on the grants program, forms used for applications, etc., may be obtained by exploring our Web page at <http://www.epa.gov/ncerqa..> Information not available on the Internet may be obtained by contacting:

U.S. Environmental Protection Agency
National Center for Environmental Research and Quality Assurance
(8703R)
401 M Street, SW
Washington DC 20460

Phone: 1-800-490-9194

Specific technical questions should be directed to the EPA contact person whose name is provided in the specific solicitation.